

# AD-USB12AR38G95



## USB/Ethernet Programmable RF Attenuator

12-Channels, 95dB, 8Ghz, 0.25dB Step size

### Specifications

Attenuation Step Size (dB)	0.25			
Number of individually controlled RF chains	12			
Enclosure	2U Rackmount			
Operating Frequency (Mhz)	50 - 8,000			
Attenuation Range (dB)	0 - 95			
Input 0.1dB Compression Power (dBm)	34			
Impedance ( $\Omega$ )	50			
IP3 Input (dBm) <sup>1</sup>	+58			
Attenuation Accuracy (dB)	Frequency	Conditions	Typical	Max
		50 - 2000 Mhz	0.25 - 20	$\pm 0.25$
	50 - 2000 Mhz	20.25 - 60	$\pm 0.50$	$\pm (2.0\% \text{ of Atten.} + 0.90)$
		60.25 - 90	$\pm 0.75$	$\pm (3.5\% \text{ of Atten.} + 0.70)$
		2000 - 4000 Mhz	0.25 - 20	$\pm 0.20$
	2000 - 4000 Mhz	20.25 - 60	$\pm 0.30$	$\pm (2.0\% \text{ of Atten.} + 0.70)$
		60.25 - 90	$\pm 0.40$	$\pm (3.0\% \text{ of Atten.} + 0.90)$
		4000 - 6000 Mhz	0.25 - 20	$\pm 0.15$
	4000 - 6000 Mhz	20.25 - 60	$\pm 0.35$	$\pm (3.5\% \text{ of Atten.} + 0.45)$
		60.25 - 90	$\pm 0.65$	$\pm (3.5\% \text{ of Atten.} + 0.90)$
		6000 - 8000 Mhz	0.25 - 20	$\pm 0.20$
	6000 - 8000 Mhz	20.25 - 60	$\pm 0.40$	$\pm (6.7\% \text{ of Atten.} + 0.55)$
60.25 - 90		$\pm 0.70$	$\pm (7.0\% \text{ of Atten.} + 0.90)$	
Dwell Time per Channel ( $\mu\text{sec}$ ) <sup>2</sup>		1ms		
Min. Dwell Time for all Channels ( $\mu\text{sec}$ ) <sup>3</sup>	2ms			
Attenuation Transition Time (ns) <sup>4</sup>	425			
VSWR	< 2.0: 1 (all states)			
Max Input RF Power (dBm)	+28			
Power Source	USB or Ethernet POE			
Power Use (mA)	310			
Operating Temperature ( $^{\circ}\text{C}$ )	0 to 40			
Communication <sup>5</sup>	USB (Hybrid Serial COM Port and HID) Ethernet (Telnet, HTTP, HTTP Web GUI, DHCP & Static IP)			
Interchain Isolation (Chain-to-chain isolation)(dB)	>110			
External Isolation (dB)	>110			
Insertion Loss (dB)		Typical	Max	
	50 Mhz	5.6	6.4	
	2400 Mhz	6.7	7.5	
	6000 Mhz	9.1	9.5	
	8000 Mhz	10.9	12.4	

<sup>A</sup> Exceeding absolute maximum ratings may cause permanent damage. Operation should be restricted to the limits in the Operating Ranges table.

Operation between operating range maximum and absolute maximum for extended periods may reduce reliability.

<sup>B</sup> Attenuator RF ports are interchangeable bidirectional signal transmission.

<sup>1</sup> Tested with 10 kHz span between signals.

<sup>2</sup> Dwell Time per Channel is the time it will take an individual attenuator channel to transition to a new attenuation state (without PC communication delays).

<sup>3</sup> Minimum Dwell Time for All Channels is the time it takes all channels to transition to a new attenuation state (without PC communication delays).

<sup>4</sup> Attenuation Transition Time is the time it takes an attenuator to reach a new attenuation state.

<sup>5</sup> USB support for simultaneous HID and Serial connections.

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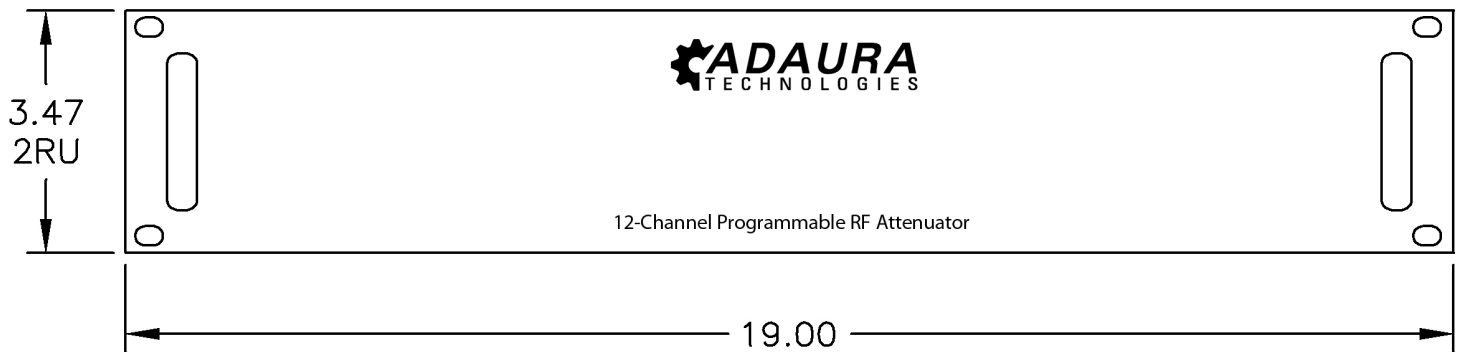
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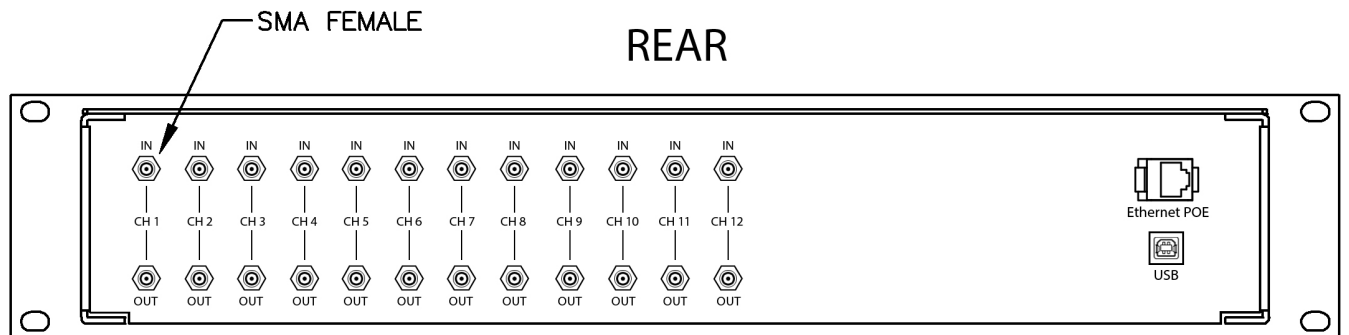
### Drawing

- Units in inches (in)

#### FRONT



#### REAR



- Depth: 12 in.